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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,206	03/25/2005	Teruo Aoyama	266057US0PCT	8829
22850 7590 10/30/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER BERMAN, SUSAN W				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
10/30/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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### Office Action Summary

**Application No.**

10/529,206

**Applicant(s)**

AOYAMA ET AL.

**Examiner**

/Susan W. Berman/

**Art Unit**

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9-26-08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-18, 20, 21, 24 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-18, 20, 21, 24 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09-26-2008 has been entered.

***Terminal Disclaimer***

The terminal disclaimer filed on 07-28-2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Application Number 10/280,878 has been reviewed and is accepted. The terminal disclaimer has been recorded. The provisional rejection of claims on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of copending Application No. 10/820878 is obviated by the terminal disclaimer.

***Response to Amendment***

The rejection of claims 10-16, 20, 21, 24 and 26 under 35 U.S.C. 102(b) as being anticipated by or, alternatively, under 35 U.S.C. 103(a) as being unpatentable over EP 0 825 227 is withdrawn. It is agreed that EP '227 does not suggest irradiating a composition comprising 100% "SPBD" and 0% of the disclosed thermoplastic elastomer component (A).

The rejection of claims under 35 U.S.C. 103(a) as being unpatentable over EP 0 825 227 is withdrawn. EP '227 teaches that, if the content of polyisoprene is too small and the content of

polybutadiene is too large, the compositions may exhibit an unsatisfactory rubber elasticity. EP '227 also teaches that, if the content of polyisoprene is too large and the content of polybutadiene is too small the compositions may exhibit an insufficient reinforcing performance. See page 3, lines 30-36. Although the previous office action stated that it would have been obvious to one skilled in the art at the time of the invention to increase the amount of syndiotactic 1,2-polybutadiene and decrease the amount of polyisoprene in the compositions disclosed by EP '227 in order to modify the properties of the irradiated products, a composition comprising 100% "SPBD" and 0% of the disclosed thermoplastic elastomer component (A) is not suggested.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-18, 20, 21, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ding et al (7,011,872). Ding et al disclose a polymer blend of two syndiotactic ,2-polybutadienes having different melting points and each present in amounts from 1 to 99% by weight of the blend (column 3, line 52, to column 4, line 6, Examples 1 and 5). Ding et al teach that polyolefins may be added but does not require such addition (column 4, lines 49-67). Ding et al teach exposing the polymer blends to electron beam radiation at a sterilization dose of about 25 kGys (column 5, line 64, to column 6, line 7). Ding et al further teach that gelling may occur

and that a gel content above 20% may increase mechanical strength and prolong the service time of a medical pump tubing application (column 6, lines 8-18). See Examples 1 and 5-6. The difference from the instantly claimed invention is that Ding et al do not teach irradiation with a dose from 5 to 200 Mrad.

It would have been obvious to one skilled in the art at the time of the invention to employ a sterilizing radiation dose of about 5 Mrads in the method disclosed by Ding et al for the following reason. It is well known in the art that a sterilizing dose of radiation is generally from 2 to 5 Mrads (20 to 50 kGys). Thus, with respect to the recitation of a dose of 5 Mrad in instant claim 10, Ding et al suggest electron beam irradiation at a dose of 50 kGys (equivalent to 5 Mrads).

Claims 10-18, 20, 21, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ding et al (7,011,872) in view of Doheny, Jr. (5,063,005). The disclosure of Ding et al is discussed herein above.

Doheny, Jr. teaches that needed radiation can be calculated by a person skilled in the art considered dosage need to effect crosslinking and kilovolts required to provide a penetrating potential and current (column 10, line 44, to column 11, line 2). Doheny, Jr further teaches obtaining a desired modulus by electron beam irradiation of polyolefins.

It would have been obvious to one skilled in the art at the time of the invention to determine the irradiation conditions, such as dosage and kilovolts, required to obtain a desired property or effect in the process disclosed by Ding et al, as taught by Doheny, Jr. Ding et al and Doheny, Jr. are considered to be analogous art because each reference teaches a process for

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irradiation of polyolefins. Ding et al teach exposing the disclosed polymer blends to electron beam radiation to sterilize and also that gelling may occur. Doheny, Jr. teaches, in an analogous method for electron beam irradiation of polyolefins, that it is known in the art to determine the required dosage and energy to obtain a desired effect, such as desired modulus. One skilled in the art at the time of the invention would have been motivated by a reasonable expectation of obtaining the desired gel and crosslinking effects and resulting properties, such as increased mechanical strength and prolonged service in the polymer blends taught by Ding et al, by increasing the radiation dose as taught by Doheny, Jr..

### ***Conclusion***

Fursuichi et al (4,324,866) is cited as art of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Susan W. Berman/ whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB  
10/24/2008

/Susan W Berman/  
Primary Examiner  
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